# Acceptance, efficiency & Trig

- **Acceptance –physical response based on ideal detector with fiducial volume-- form M.C. simulation**

  **--Glb muon or J/psi efficiency to model the geometric and kinematic acceptance**
- **Trig. Efficiency, defined and refered to offline ideal algorithm.**
- **When real data come,**

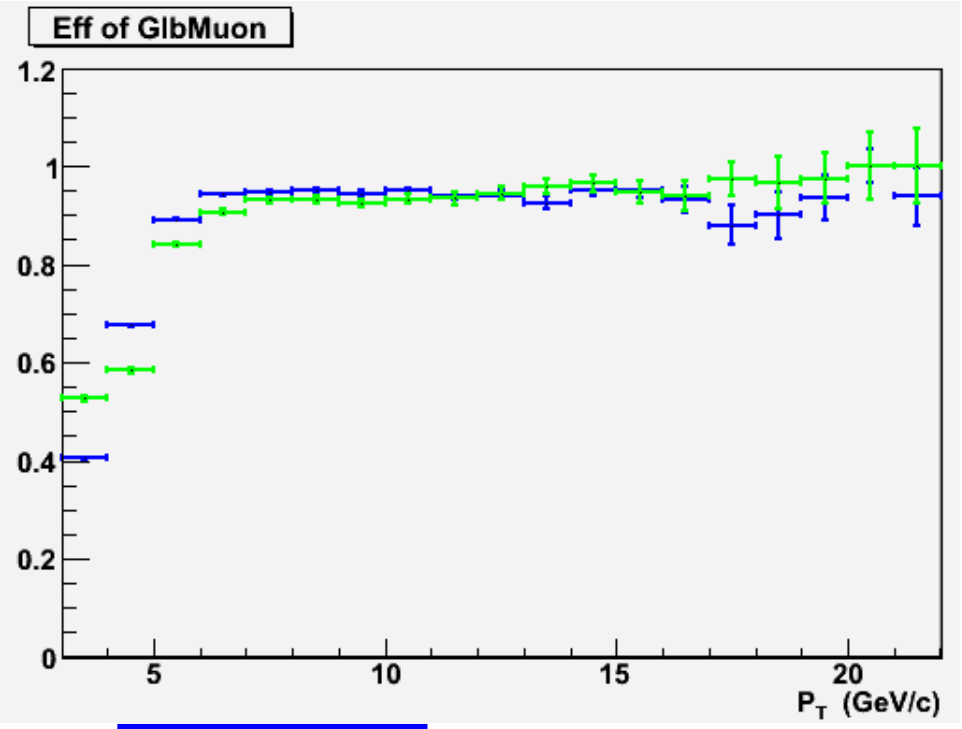
**Acceptance – ideal one: M.C.→ Offline software algorithm**

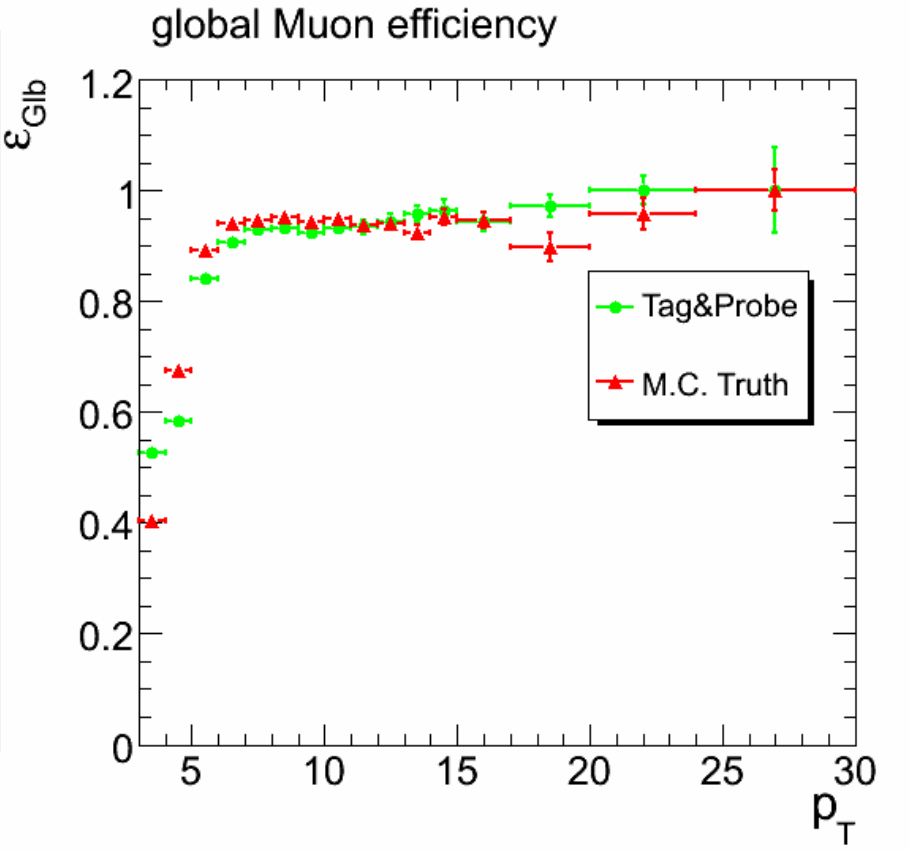
**Nowadays: Trig. Simu– Online Algorithm**

**L1-->HLT (more elaborated algorithms and filters)-> ACAP to offline reconstruction**

**So we'd better separate them to 2 parts.**

# Glb Muon efficiency: Tag μ pt>5GeV

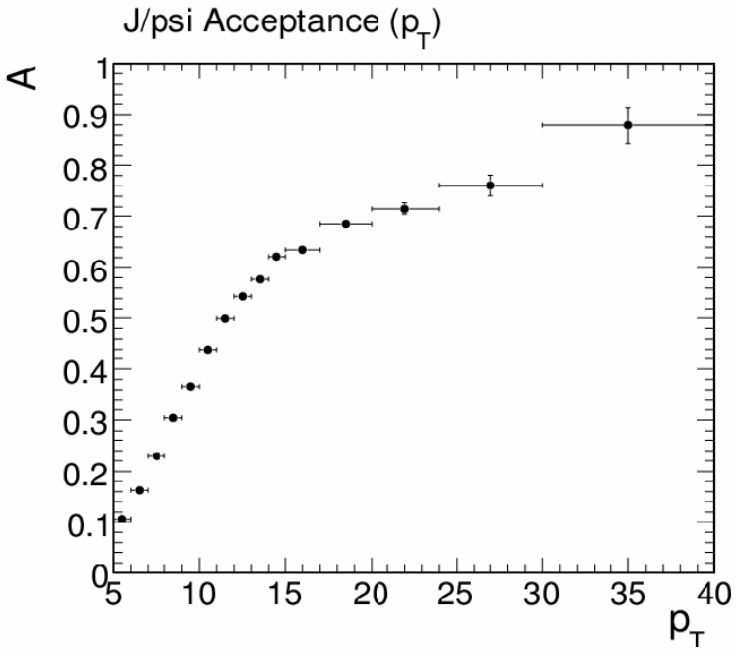


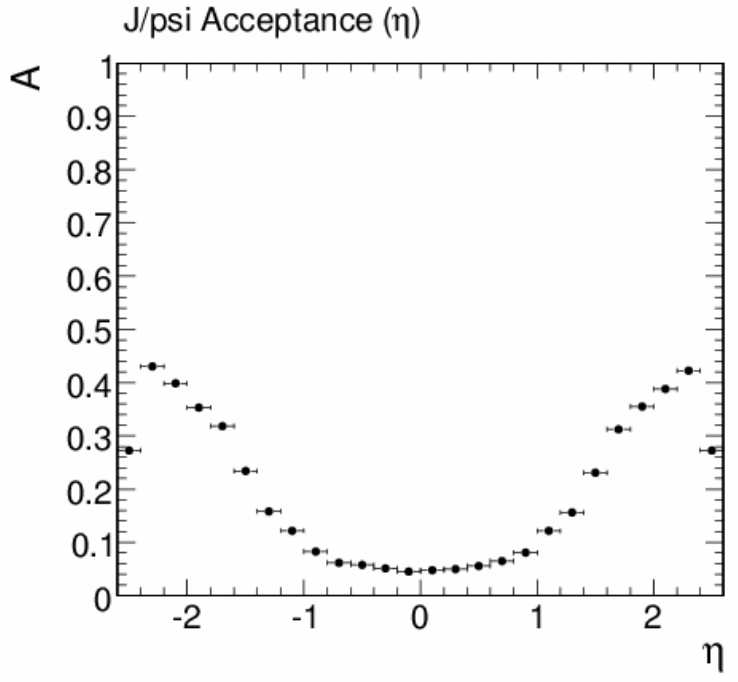



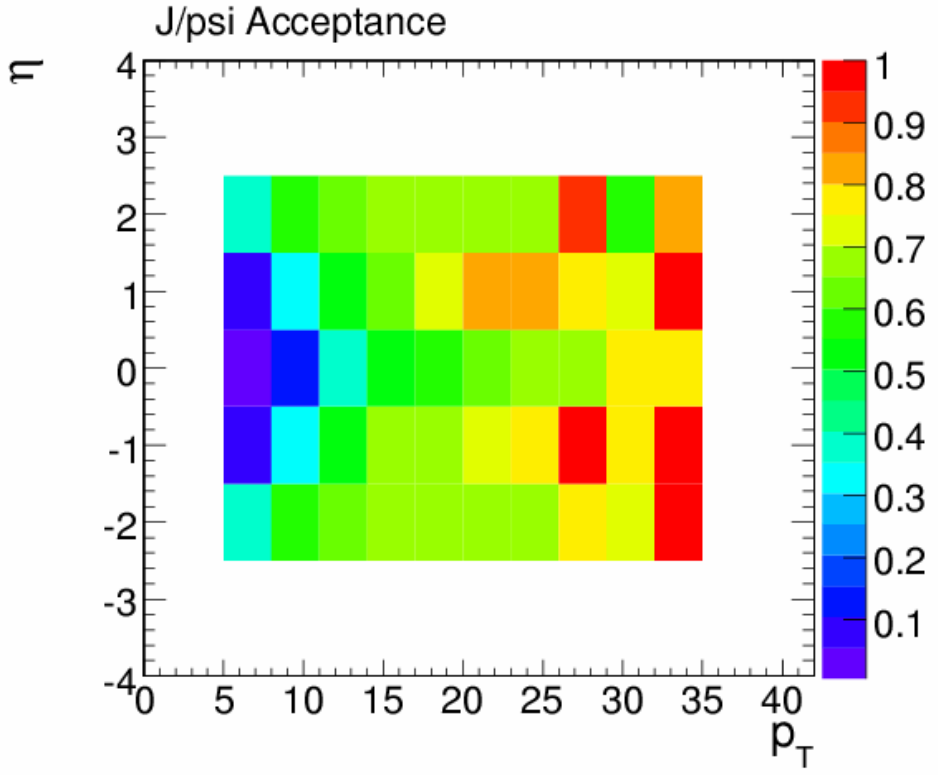

M.C. Truth

Tag&Probe

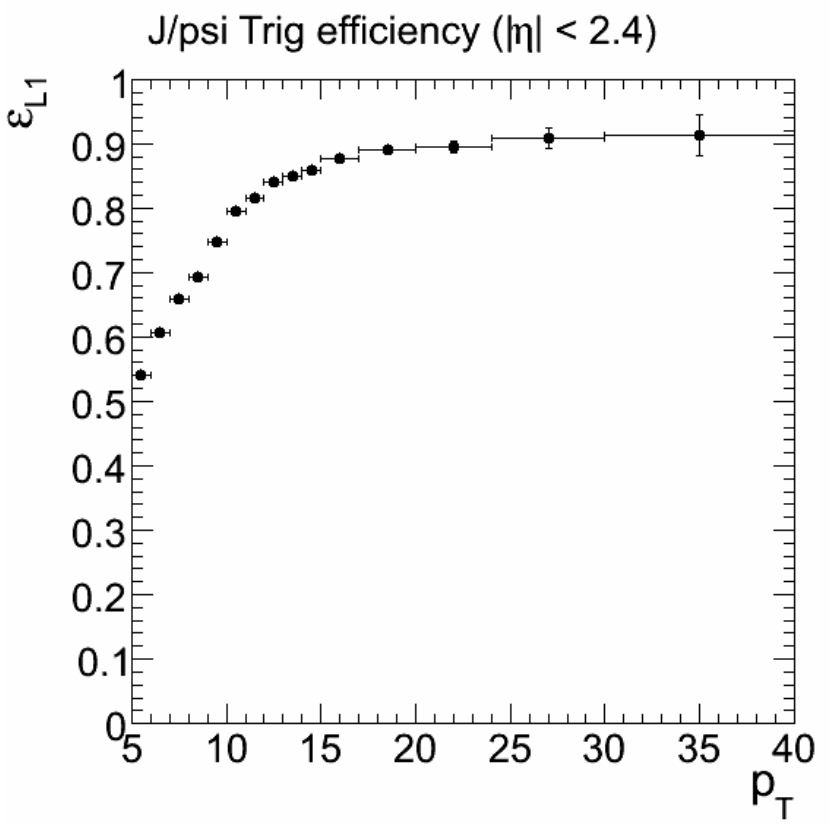
# Acceptance


J/psi Acceptance ($p_T$)
A
$p_T$

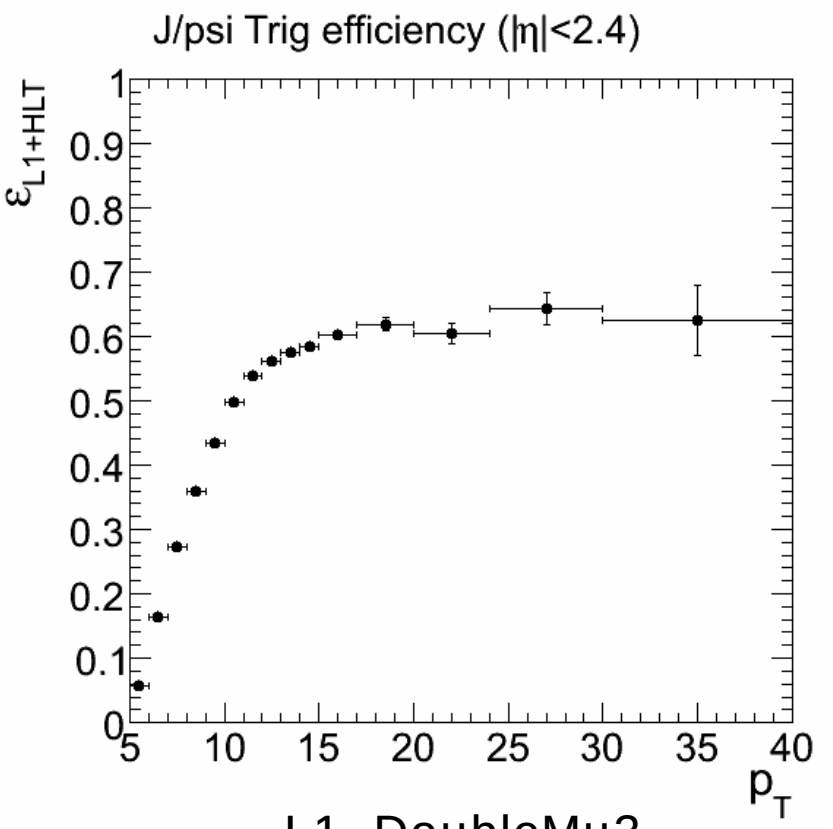

J/psi Acceptance (η)
A
η


J/psi Acceptance
η
$p_T$

# Trig efficiency: J/psi refered to Offline

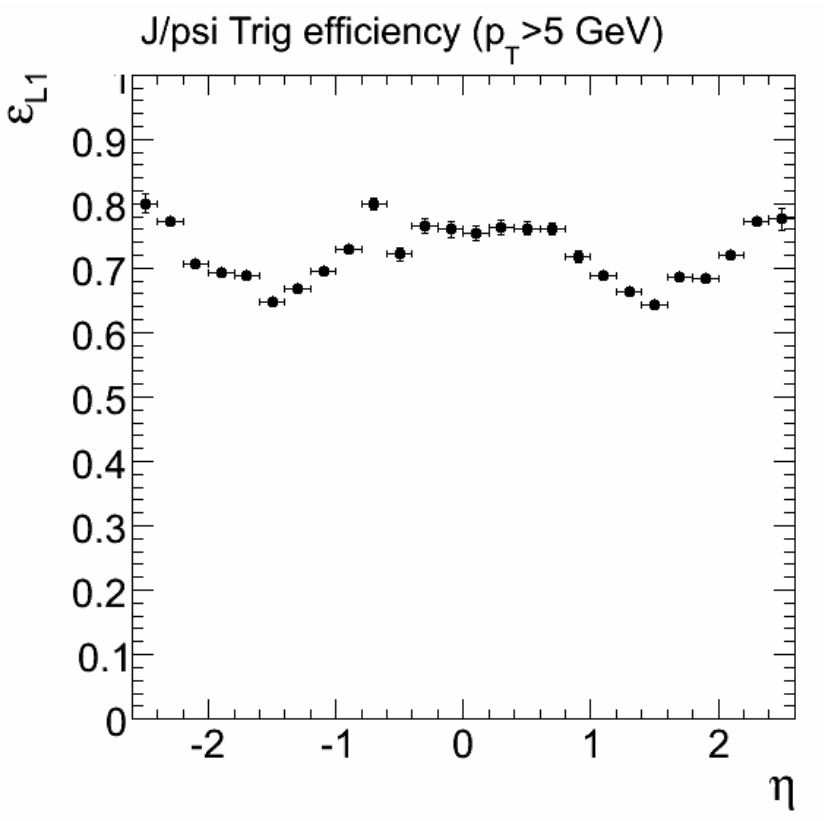



L1_DoubleMu3

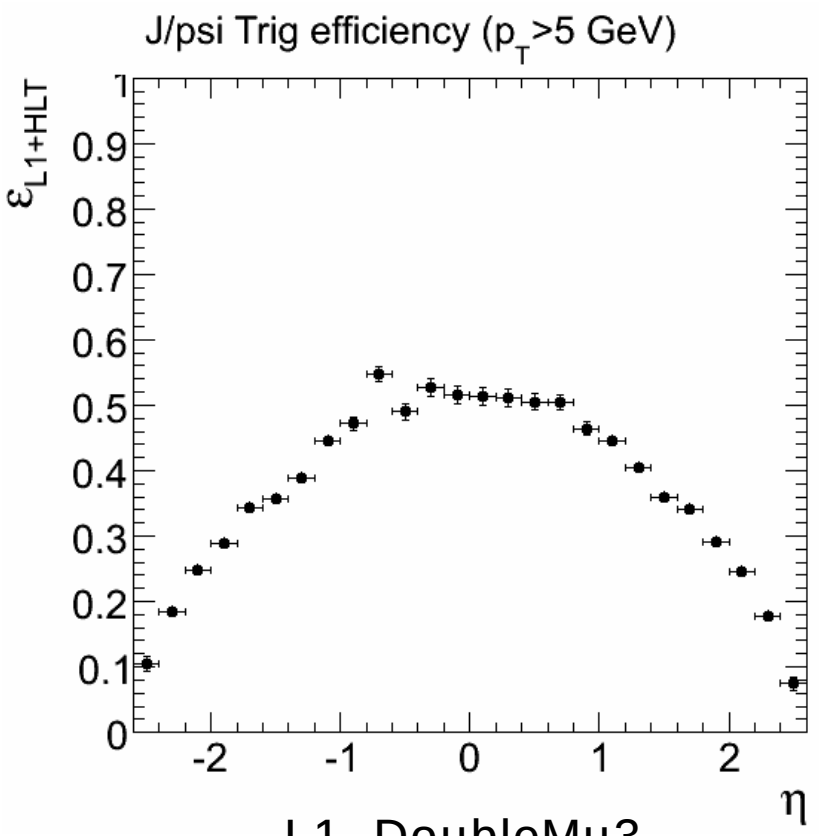



L1_DoubleMu3
+HLT2MuonNonIso

# Trig efficiency: J/psi refered to Offline

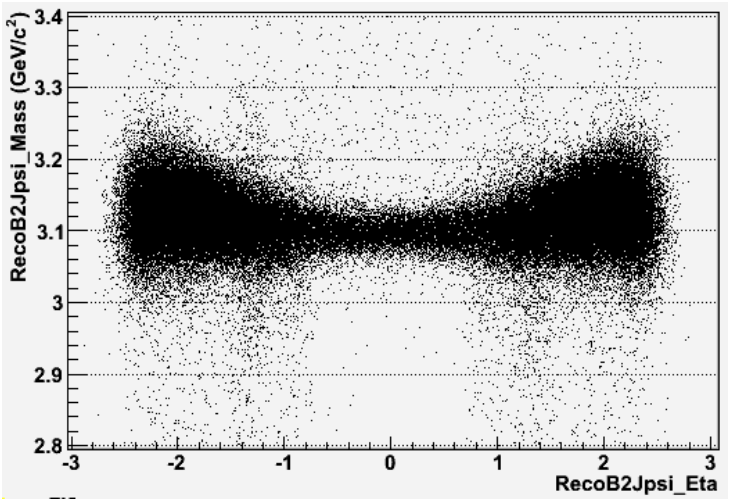


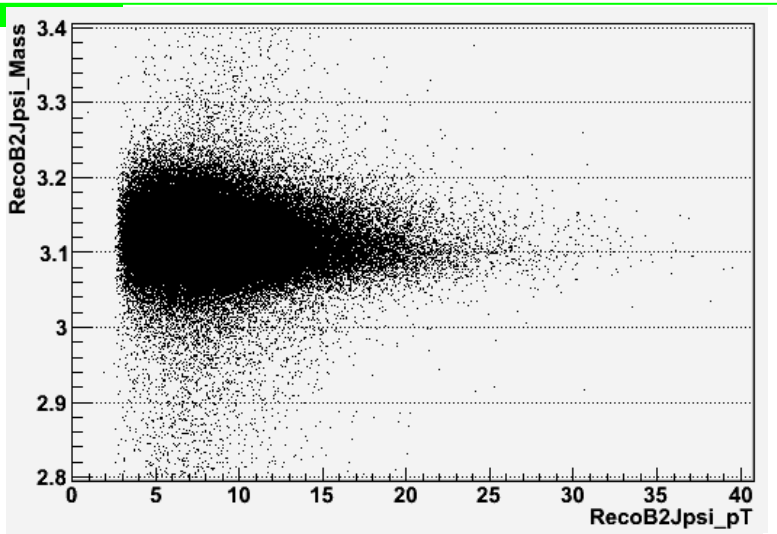

L1_DoubleMu3

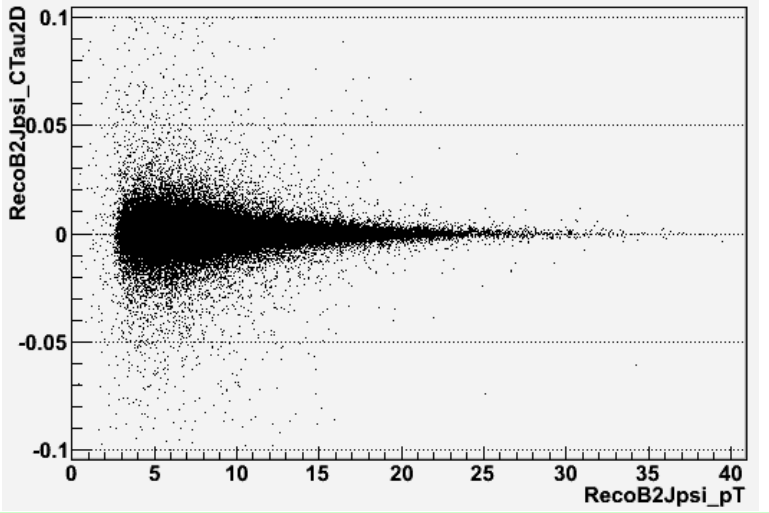



L1_DoubleMu3
+HLT2MuonNonIso

# Resolution: mass & ctau p-J/Ψ

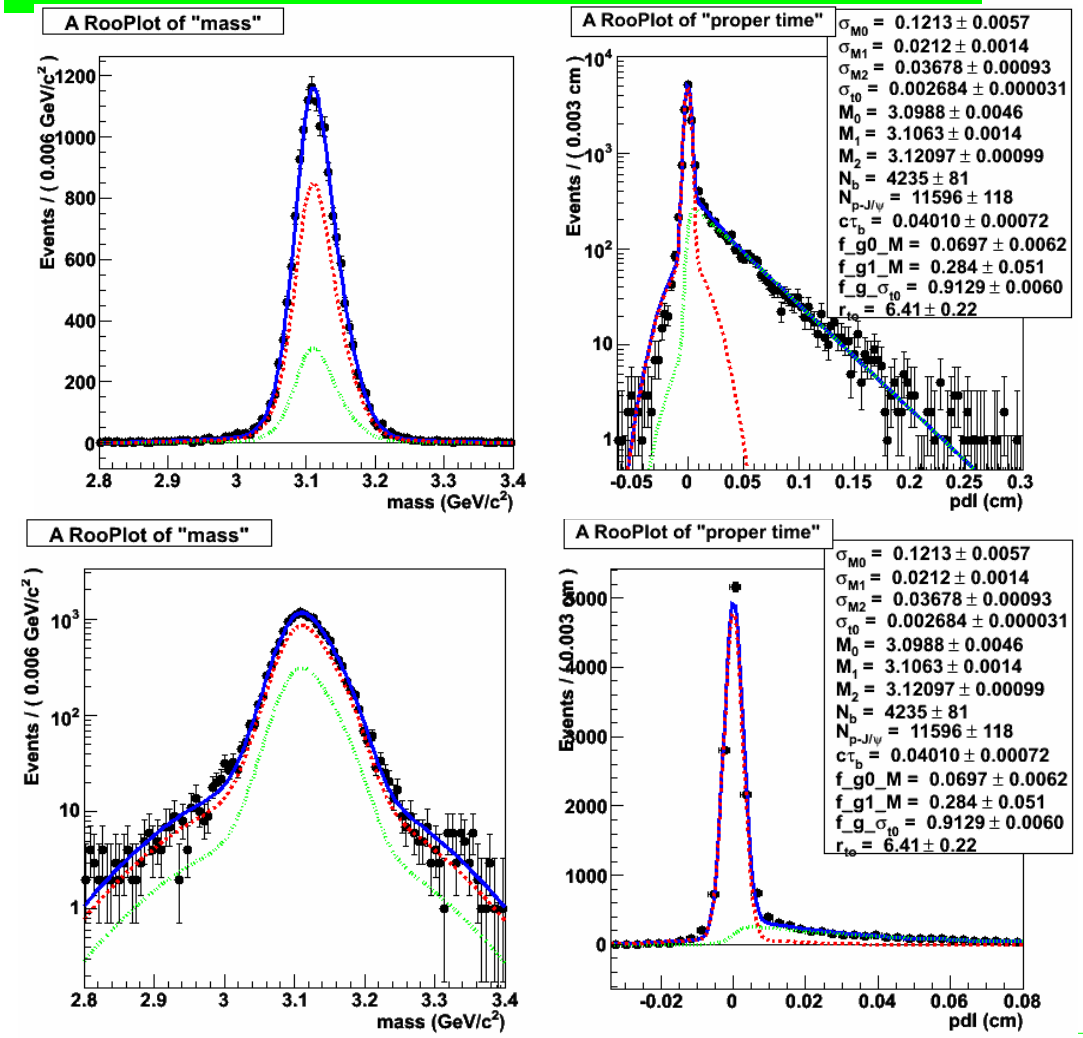


# pT: 9-10GeV

p-jpsi: 11545
b:4288




1. a finite experimental resolution on each measurement

$$F_I(t) = \exp(-t/\tau)$$

$$F_R(t) = \exp(-t/\tau) \otimes G(t, \mu, \sigma)$$
$$\equiv \int dt' \exp(-t'/\tau)\, G(t-t', \mu, \sigma)$$

$$F_E(t,dt) = \exp(-t/\tau) \otimes G(t, \mu, \mathbf{dt})$$

$$F_E(t,dt) = \exp(-t/\tau) \otimes G(t, \mu, \mathbf{s \cdot dt})$$